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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/666,074	09/21/2000	Bret Alden Greenstein	AUS9-2000-0384-US1	8919

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EXAMINER	
WON, MICHAEL YOUNG	
ART UNIT	**PAPER NUMBER**
2155	8

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/666,074	Applicant(s) GREENSTEIN ET AL.	
	Examiner Young N Won	Art Unit 2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 11, 12, 14-17, 21, 23-28, 30, 38, 39, 43, and 45-54 have been amended. Claims 1-54 have been re-examined and are pending with this action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-5, 8, 11, 17-20, 28, 30-35, 38-42, 50, 52, and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsui et al. (US 5956028 A).

INDEPENDENT:

As per claims 1, 30, and 52, Matsui teaches a method, an apparatus, and a computer program product, in a computer readable medium of a data processing system, comprising: rendering a three-dimensional environment (see col.1, lines 19-23) on a client computer associated with a first participant to form a rendered three-dimensional environment (see col.1, lines 43-46); receiving shared data from a client computer associated with a second participant (see col.1, lines 50-57), wherein the shared data includes information to be shared between the second participant and the first participant (see abstract and col.1, lines 61-64 and col.5, lines 20-22) and orientation information that indicates where in the three-dimensional environment the second participant wishes to present the shared data (see col.15, lines 50-52: Matsui teaches of abutters which are essentially manipulated or changed objects (see col.1, lines 46-50) within a three-dimensional environment shared by the computer graphics of each client within the network. Matsui also teaches that plurality of objects are employed for constructing **one** three-dimensional space (see col.3, lines 40-42). Therefore it is implicit that the shared data to be displayed within the three-dimensional environment will also comprise of "abutter(s)"); and displaying a virtual representation (see col.2, lines 42-43) of the shared data in the rendered three-dimensional environment on the client computer associated with the first participant based on the orientation information (see col.1, lines 57-64).

As per claims 28, 50, and 54, Matsui teaches a method, an apparatus, and a computer program product, in a computer readable medium of a data processing system, comprising: presenting a graphical user interface on a client computer

associated with a first participant (see col.3, lines 11-14); rendering a three-dimensional environment from the perspective of the first participant in the graphical user interface to form a rendered three-dimensional environment (see col.3, lines 11-14), the three-dimensional environment including an avatar representing a second participant (see col.13, lines 3-13); receiving a selection of the avatar from the first participant (see col.13, lines 7-11); receiving a selection, in the graphical user interface, of a file to be transferred from the client computer associated with the first participant (see col.5, lines 20-30); and transferring the file to a client computer associated with the second participant (see col.13, lines 4-7).

DEPENDENT:

As per claims 2 and 31, Matsui further teaches wherein the shared data includes two-dimensional data (see col.25, lines 1-5: three-dimensional image is comprised of plural two-dimensional images).

As per claims 3 and 32, Matsui further teaches wherein the virtual representation is a surface texture image (see col.17, lines 24-28).

As per claims 4 and 33, Matsui further teaches wherein the three-dimensional environment includes at least one three-dimensional object (see col.1, lines 13-18 and col.3, lines 40-42) and the step of displaying a virtual representation comprises: applying the surface texture image to the three-dimensional object (see col.11, line 61 to col.12, line 18 and col.17, lines 24-31).

As per claims 5 and 34, Matsui further teaches wherein the orientation information identifies the three-dimensional object (see col.15, lines 48-53).

As per claims 8 and 35, Matsui teaches of further comprising executing an external application to decode the shared data to form the virtual representation of the shared data (see col.1, lines 50-57 and col.2, lines 3-10).

As per claims 11 and 38, Matsui teach of further comprising: performing a modification to the shared data (see col.1, lines 46-50); generating a shared data update event indicating the modification (implicit: see col.5, lines 20-30 and col.11, lines 61-65); and sending the shared data update event to at least one other participant (see col.1, lines 50-53).

As per claims 17 and 39, Matsui further teaches further comprising: receiving a shared data update event indicating a modification to the shared data (see col.12, lines 16-17); modifying the shared data according to the shared data update event to form modified data (see col.12, lines 17-18); and displaying a modified representation of the modified data in the rendered three-dimensional environment (implicit: see col.5, lines 20-30 and col.10, lines 61-65).

As per claims 18 and 40, Matsui further teaches wherein the shared data is three-dimensional data (see abstract and col.5, lines 20-30).

As per claims 19 and 41, Matsui further teaches wherein the virtual representation is a three-dimensional object (see col.5, lines 20-30 and col.20, lines 14-18).

As per claims 20 and 42, Matsui further teaches wherein the orientation information identifies a location and orientation for the virtual representation in the three-dimensional environment (see col.15, lines 50-52).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 5956028 A) in view of Lamiraux et al. (US 5802531 A). Matsui teaches all the limitations of claim 6, except wherein the two-dimensional data comprises one of a word processing document, a spreadsheet document, and a presentation document. Lamiraux teaches of two-dimensional documents employable in a three-dimensional environment (see col.1, lines 52-59). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Lamiraux within the system of Matsui by implementing two-dimensional documents within the three-dimensional data because Lamiraux teaches that documents can be stored as objects (see col.1, lines 14-18), thus any of the objects described by Matsui could comprise of document data to be displayed in the three-dimensional environment because the content of the object is subjective and does not change the functional aspect of the invention.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 5956028 A) in view of Durst et al. (US 5933829 A). Matsui teaches all the limitation of claim 7, except wherein the two-dimensional data comprises a uniform resource locator. Durst teaches wherein the two-dimensional data comprises a uniform resource locator (see col.5, lines 10-12). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Durst within the system of Matsui by implementing two-dimensional data comprising a uniform resource locator within the data processing method, apparatus, and program because Durst teaches that whatever data included within a code depends on the "application desired by the vendor" (see col.4, lines 59-60), therefore the two-dimensional data may comprise any information preferred by the vendor and does not functionally relate to the steps recited.

5. Claims 9 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 5956028 A) in view of Paulini et al (US 5224160 A).

As per claims 9 and 36, Matsui does not explicitly teach of further comprising executing an external plug-in application to decode the shared data to form the virtual representation of the shared data. Paulini teaches of an external plug-in application to decode the shared data to form the virtual representation of the shared data (see col.6, line63 to col.7, line 32). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Paulini within the

system of Matsui by implementing external plug-in application to decode the shared data within the data processing method, apparatus, and program because this would enable the system to be administered or managed by a central server rather than each client transmitting and processing each computer graphics data back and forth thereby reducing transmission quantity (see Matsui col.1, line 65 to col.2, line 2). Furthermore, Matsui teaches with the implementation of a central server ("host"), it eliminates the distribution of the recording medium when virtual spaces are extended or switched (see col.2, lines 11-18).

6. Claims 10 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 5956028 A) further in view of Hall et al. (US 6138119 A). Matsui does not explicitly teach wherein the shared data includes a wrapper application and the step of executing an external application comprises executing the wrapper application. Hall teaches wherein the shared data includes a wrapper application and the step of executing an external application comprises executing the wrapper application (see col.9, lines 52-56). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Hall within the system of Matsui by implementing wrapper application within the data processing method, apparatus, and program because Hall teaches that wrappers are employed to control compatibility, "thereby limiting flexibility and the ability to customize". In the case of sharing data among plurality of remote users, wrapper allows for variations in the devices or programs to be compatible.

7. Claims 12-16, 21-27, 29, 43-49, 51, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 5956028 A) in view of Dawson (US 5727155 A).

INDEPENDENT:

As per claims 21, 43, and 53, Matsui teaches a method, an apparatus, and a computer program product, in a computer readable medium of a data processing system, comprising: rendering a three-dimensional environment on a client computer associated with a first participant to form a rendered three-dimensional environment (see col.1, lines 19-24 and col.11, lines 31-45); receiving shared data from a client computer associated with a second participant (see col.1, lines 50-57 and col.11, lines 45-50), wherein the shared data includes information to be shared between the second participant and the first participant (see abstract and col.1, lines 61-64 and col.5, lines 20-22); and displaying a virtual representation of the shared data in the rendered three-dimensional environment on the client computer associated with the first participant (see col.2, lines 42-43 and col.10, lines 61-65). Matsui does not explicitly teach of the shared data including access control information indicating an access control level for the first participant and displaying based on the access control level of the first participant. Dawson teaches of shared data including access control information indicating an access control level for the first participant (see abstract) and displaying based on the access control level of the first participant (see col.2, lines 38-43). It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to employ the teachings of Dawson within the system of Matsui by implementing access control within the data processing method, apparatus, and program because Dawson teaches that in a shared (see title) environment, "relinquishing complete control" may be "detrimental" because it allows the participant to have access to information and make modifications to applications that the host or server might not want the participant to have or make such as in proprietary applications and/or data. Dawson further adds other motivation for including access control (see col.1, line 54 to col.2, line 26).

DEPENDENT:

As per claim 12, Matsui does not explicitly teach wherein the shared data includes access control information indicating an access control level for the first participant. Dawson teaches wherein the shared data includes access control information indicating an access control level for the first participant (see claim 21 rejection above).

As per claims 13, 22, and 44, Matsui does not explicitly teach of an access control level comprising one of ownership, authorship, viewership, monitorship, and blind. Dawson further teaches wherein the access control level is one of ownership, authorship, viewership, monitorship, and blind (see col.2, lines 1-3; col.8, lines 25-30; and claim 21 motivation above).

As per claims 14, 23, and 45, Matsui further teaches of receiving a request to modify the shared data (see claim 11 rejection above), but he does not explicitly teach determining whether the first participant has a sufficient access control level. Dawson

teaches of determining whether the first participant has a sufficient access control level (implicit: see claim 21 rejection above).

As per claims 15, 24, and 46, Dawson further teaches of modifying the shared data if the first participant has sufficient access control level (see claim 11 rejection above).

As per claims 16, 26, and 48, Dawson further teaches of notifying the first participant of insufficient access control if the first participant does not have a sufficient access control level (see col.12, lines 8-13).

As per claims 25 and 47, Matsui further teaches of generating a shared data update event indicating the modification; and sending the shared data update event to at least one other participant (see claim 11 rejection above).

As per claims 27 and 49, Matsui teach of further comprising: receiving a shared data update event indicating a modification to the shared data; modifying the shared data according to the shared data update event to form modified data; and displaying a modified representation of the modified data in the rendered three-dimensional environment based on the access control level of the first participant (see claim 17 and claim 21 rejections above).

As per claims 29 and 51, Matsui does not teach of further comprising: sending a transfer request to the second participant; receiving an acceptance from the second participant; wherein the step of transferring the file to a client computer is performed in response to receiving the acceptance. Dawson teaches of sending a transfer request to the second participant (see col.2, lines 5-10); receiving an acceptance from the second

participant (see col.11, lines 40-44); wherein the step of transferring the file to a client computer is performed in response to receiving the acceptance (see col.11, lines 40-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teachings of Dawson within the system of Matsui by implementing transferring the file after receiving a response from a request to send within the method, apparatus, and computer program product of the data processing system because such an implementation eliminates unnecessary transmission of data and therefore reduces load which is taught by Matsui as one of the deficiencies of prior art (see col.1, line 67 to col.2, line 2).

Response to Arguments

8. Applicant's arguments with respect to claims 1-54 have been considered but are moot in view of the new ground(s) of rejection.

Considering the arguments presented and after further searching, the primary reference Matsui et al. (US 5,956,028 A) was referenced to teach all the limitations of claims 1-5, 8, 11, 17-20, 28, 30-35, 38-42, 50, 52, and 54. The remaining claims were rejected under 35 U.S.C. 103(a) with secondary references.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Young N Won whose telephone number is 703-605-4241. The examiner can normally be reached on M-Th: 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on 703-308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Young N Won

April 28, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER